

# Christopher C Moser

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

103  
papers

10,904  
citations

41  
h-index

104  
g-index

123  
ext. papers

11,694  
ext. citations

7.1  
avg, IF

5.68  
L-index

| #   | Paper  | IF   | Citations |
|-----|--|------|-----------|
| 103 | Emulating photosynthetic processes with light harvesting synthetic protein (maquette) assemblies on titanium dioxide. <i>Materials Advances</i> , <b>2020</b> , 1, 1877-1885   | 3.3  | 0         |
| 102 | Ultrafast flavin/tryptophan radical pair kinetics in a magnetically sensitive artificial protein. <i>Physical Chemistry Chemical Physics</i> , <b>2019</b> , 21, 13453-13461   | 3.6  | 6         |
| 101 | Artificial oxygen carriers and red blood cell substitutes: A historic overview and recent developments toward military and clinical relevance. <i>Journal of Trauma and Acute Care Surgery</i> , <b>2019</b> , 87, S48-S58 | 3.3  | 10        |
| 100 | De novo synthetic biliprotein design, assembly and excitation energy transfer. <i>Journal of the Royal Society Interface</i> , <b>2018</b> , 15,   | 4.1  | 9         |
| 99  | Rational Construction of Compact de Novo-Designed Biliverdin-Binding Proteins. <i>Biochemistry</i> , <b>2018</b> , 57, 6752-6756   | 3.2  | 5         |
| 98  | Magnetically Sensitive Radical Photochemistry of Non-natural Flavoproteins. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 8705-8713   | 16.4 | 13        |
| 97  | Multi-step excitation energy transfer engineered in genetic fusions of natural and synthetic light-harvesting proteins. <i>Journal of the Royal Society Interface</i> , <b>2017</b> , 14,                                  | 4.1  | 12        |
| 96  | Maquette Strategy for Creation of Light- and Redox-Active Proteins <b>2017</b> , 1-33  |      | 2         |
| 95  | Design and engineering of water-soluble light-harvesting protein maquettes. <i>Chemical Science</i> , <b>2017</b> , 8, 316-324   | 9.4  | 27        |
| 94  | De Novo Construction of Redox Active Proteins. <i>Methods in Enzymology</i> , <b>2016</b> , 580, 365-88  | 1.7  | 15        |
| 93  | First principles design of a core bioenergetic transmembrane electron-transfer protein. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2016</b> , 1857, 503-512   | 4.6  | 12        |
| 92  | Engineering an Artificial Flavoprotein Magnetosensor. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 16584-16587   | 16.4 | 18        |
| 91  | Design and engineering of a man-made diffusive electron-transport protein. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2016</b> , 1857, 513-521  | 4.6  | 14        |
| 90  | Designing Light-Activated Charge-Separating Proteins with a Naphthoquinone Amino Acid. <i>Angewandte Chemie</i> , <b>2015</b> , 127, 13830-13833   | 3.6  | 6         |
| 89  | Designing Light-Activated Charge-Separating Proteins with a Naphthoquinone Amino Acid. <i>Angewandte Chemie - International Edition</i> , <b>2015</b> , 54, 13626-9  | 16.4 | 13        |
| 88  | Engineering the assembly of heme cofactors in man-made proteins. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 3192-9   | 16.4 | 29        |
| 87  | Constructing a man-made c-type cytochrome maquette : electron transfer, oxygen transport and conversion to a photoactive light harvesting maquette. <i>Chemical Science</i> , <b>2014</b> , 5, 507-514                     | 9.4  | 60        |

86 Tunneling in Electron Transport **2014**, 121-139

85 Elementary tetrahelical protein design for diverse oxidoreductase functions. *Nature Chemical Biology*, **2013**, 9, 826-833 11.7 104

84 Assembly of a Photoactivatable Cofactor Triad within a Designed Protein. *Biophysical Journal*, **2013**, 104, 562a 2.9

83 Engineering oxidoreductases: maquette proteins designed from scratch. *Biochemical Society Transactions*, **2012**, 40, 561-6 5.1 43

82 Engineering enzymes. *Faraday Discussions*, **2011**, 148, 443-8 3.6 23

81 Comparing photosynthetic and photovoltaic efficiencies and recognizing the potential for improvement. *Science*, **2011**, 332, 805-9 33.3 1143

80 An electronic bus bar lies in the core of cytochrome bc1. *Science*, **2010**, 329, 451-4 33.3 100

79 Guidelines for tunneling in enzymes. *Biochimica Et Biophysica Acta - Bioenergetics*, **2010**, 1797, 1573-86 4.6 100

78 Design and engineering of an O(2) transport protein. *Nature*, **2009**, 458, 305-9 50.4 204

77 Distance metrics for heme protein electron tunneling. *Biochimica Et Biophysica Acta - Bioenergetics*, **2008**, 1777, 1032-7 4.6 57

76 Hydrogen bond-free flavin redox properties: managing flavins in extreme aprotic solvents. *Organic and Biomolecular Chemistry*, **2008**, 6, 2204-12 3.9 9

75 Controlling complexity and water penetration in functional de novo protein design. *Biochemical Society Transactions*, **2008**, 36, 1106-11 5.1 14

74 Quinone and non-quinone redox couples in Complex III. *Journal of Bioenergetics and Biomembranes*, **2008**, 40, 493-9 3.7 35

73 Breaking the Q-cycle: finding new ways to study Qo through thermodynamic manipulations. *Journal of Bioenergetics and Biomembranes*, **2008**, 40, 501-7 3.7 12

72 Exposing the complex III Qo semiquinone radical. *Biochimica Et Biophysica Acta - Bioenergetics*, **2007**, 1767, 883-7 4.6 71

71 Darwin at the molecular scale: selection and variance in electron tunnelling proteins including cytochrome c oxidase. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2006**, 361, 1295-305 5.8 88

70 Bacteriochlorophyll Protein Maquettes **2006**, 349-363 1

69 Design and engineering of photosynthetic light-harvesting and electron transfer using length, time, and energy scales. *Biochimica Et Biophysica Acta - Bioenergetics*, **2006**, 1757, 90-105 4.6 101

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|----|--|------|-----|
| 68 | Electron tunneling chains of mitochondria. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2006</b> , 1757, 1096-1109  | 4.09 | 140 |
| 67 | Role of the PEWY glutamate in hydroquinone-quinone oxidation-reduction catalysis in the Qo Site of cytochrome bc1. <i>Biochemistry</i> , <b>2006</b> , 45, 10492-503         | 3.2  | 43  |
| 66 | Resilience of Rhodobacter sphaeroides cytochrome bc1 to heme c1 ligation changes. <i>Biochemistry</i> , <b>2006</b> , 45, 14247-55   | 3.2  | 11  |
| 65 | Application of Marcus Theory to Photosystem I Electron Transfer  |      | 8   |
| 64 | Design of amphiphilic protein maquettes: controlling assembly, membrane insertion, and cofactor interactions. <i>Biochemistry</i> , <b>2005</b> , 44, 12329-43               | 3.2  | 57  |
| 63 | Tunneling in PSII. <i>Photochemical and Photobiological Sciences</i> , <b>2005</b> , 4, 933-9  | 4.2  | 44  |
| 62 | Fixing the Q cycle. <i>Trends in Biochemical Sciences</i> , <b>2005</b> , 30, 176-82   | 10.3 | 173 |
| 61 | Reversible redox energy coupling in electron transfer chains. <i>Nature</i> , <b>2004</b> , 427, 607-12  | 50.4 | 231 |
| 60 | ATR-FTIR spectroscopy studies of iron-sulfur protein and cytochrome c1 in the Rhodobacter capsulatus cytochrome bc1 complex. <i>Biochemistry</i> , <b>2004</b> , 43, 9477-86 | 3.2  | 18  |
| 59 | Novel cyanide inhibition at cytochrome c1 of Rhodobacter capsulatus cytochrome bc1. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2004</b> , 1655, 71-6          | 4.6  | 10  |
| 58 | Functionalizing nanocrystalline metal oxide electrodes with robust synthetic redox proteins. <i>ChemBioChem</i> , <b>2003</b> , 4, 1332-9                                    | 3.8  | 47  |
| 57 | Mechanism for electron transfer within and between proteins. <i>Current Opinion in Chemical Biology</i> , <b>2003</b> , 7, 551-6   | 9.7  | 212 |
| 56 | Hydrophilic to amphiphilic design in redox protein maquettes. <i>Current Opinion in Chemical Biology</i> , <b>2003</b> , 7, 741-8  | 9.7  | 47  |
| 55 | Assembly of a Vectorially Oriented Four-Helix Bundle at the Air/Water Interface via Directed Electrostatic Interactions. <i>Langmuir</i> , <b>2003</b> , 19, 1515-1521       | 4    | 7   |
| 54 | Length, time, and energy scales of photosystems. <i>Advances in Protein Chemistry</i> , <b>2003</b> , 63, 71-109   |      | 34  |
| 53 | P450 BM3: the very model of a modern flavocytochrome. <i>Trends in Biochemical Sciences</i> , <b>2002</b> , 27, 250-7  | 10.3 | 355 |
| 52 | De Novo Design of a Cytochrome b Maquette for Electron Transfer and Coupled Reactions on Electrodes. <i>Journal of Physical Chemistry B</i> , <b>2002</b> , 106, 617-624     | 3.4  | 41  |
| 51 | X-ray Scattering Studies of Maquette Peptide Monolayers. 2. Interferometry at the Vapor/Solid Interface. <i>Langmuir</i> , <b>2001</b> , 17, 1193-1199                       | 4    | 9   |

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|----|---|------|------|
| 50 | Large scale domain movement in cytochrome bc(1): a new device for electron transfer in proteins. <i>Trends in Biochemical Sciences</i> , <b>2001</b> , 26, 445-51   | 10.3 | 120  |
| 49 | Cytochrome c and Cytochrome c Oxidase: Monolayer Assemblies and Catalysis. <i>Journal of Physical Chemistry B</i> , <b>2001</b> , 105, 11351-11362  | 3.4  | 86   |
| 48 | Controlling the functionality of cytochrome c(1) redox potentials in the <i>Rhodobacter capsulatus</i> bc(1) complex through disulfide anchoring of a loop and a beta-branched amino acid near the heme-ligating methionine. <i>Biochemistry</i> , <b>2001</b> , 40, 14547-56 | 3.2  | 34   |
| 47 | Proof of principle in a de novo designed protein maquette: an allosterically regulated, charge-activated conformational switch in a tetra-alpha-helix bundle. <i>Biochemistry</i> , <b>2001</b> , 40, 5474-87   | 3.2  | 26   |
| 46 | Coenzyme Q Oxidation Reduction Reactions in Mitochondrial Electron Transport. <i>Modern Nutrition</i> , <b>2000</b> , 65-82   |      | 5    |
| 45 | Simple redox-linked proton-transfer design: new insights from structures of quinol-fumarate reductase. <i>Structure</i> , <b>2000</b> , 8, R23-32   | 5.2  | 61   |
| 44 | Electron transfer in natural proteins theory and design. <i>Sub-Cellular Biochemistry</i> , <b>2000</b> , 35, 1-28  | 5.5  | 10   |
| 43 | Uncovering the [2Fe2S] domain movement in cytochrome bc1 and its implications for energy conversion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2000</b> , 97, 4567-72   | 11.5 | 140  |
| 42 | Electrochemistry of Self-Assembled Monolayers of Iron Protoporphyrin IX Attached to Modified Gold Electrodes through Thioether Linkage. <i>Journal of Physical Chemistry B</i> , <b>2000</b> , 104, 2868-2877   | 3.4  | 69   |
| 41 | X-ray Scattering Studies of Maquette Peptide Monolayers. 1. Reflectivity and Grazing Incidence Diffraction at the Air/Water Interface. <i>Langmuir</i> , <b>2000</b> , 16, 10404-10418  | 4    | 20   |
| 40 | Self-assembly of heme A and heme B in a designed four-helix bundle: implications for a cytochrome c oxidase maquette. <i>Biochemistry</i> , <b>2000</b> , 39, 11041-9   | 3.2  | 76   |
| 39 | Electronic and Vibrational Coherence in Photosynthetic Cofactors: Comparison of Solutions and Proteins. <i>Laser Chemistry</i> , <b>1999</b> , 19, 195-199  |      | 1    |
| 38 | Pump Probe Anisotropy Studies of the Photosynthetic Reaction Center. <i>Laser Chemistry</i> , <b>1999</b> , 19, 161-164   |      |      |
| 37 | Engineering Oriented Heme Protein Maquette Monolayers through Surface Residue Charge Distribution Patterns. <i>Journal of Physical Chemistry B</i> , <b>1999</b> , 103, 9029-9037   | 3.4  | 11   |
| 36 | Natural engineering principles of electron tunnelling in biological oxidation-reduction. <i>Nature</i> , <b>1999</b> , 402, 47-52   | 50.4 | 2858 |
| 35 | Primary steps in the energy conversion reaction of the cytochrome bc1 complex Qo site. <i>Journal of Bioenergetics and Biomembranes</i> , <b>1999</b> , 31, 225-33  | 3.7  | 17   |
| 34 | Effect of inhibitors on the ubiquinone binding capacity of the primary energy conversion site in the <i>Rhodobacter capsulatus</i> cytochrome bc(1) complex. <i>Biochemistry</i> , <b>1999</b> , 38, 14973-80   | 3.2  | 30   |
| 33 | Ubiquinone binding capacity of the <i>Rhodobacter capsulatus</i> cytochrome bc1 complex: effect of diphenylamine, a weak binding QO site inhibitor. <i>Biochemistry</i> , <b>1999</b> , 38, 3440-6  | 3.2  | 29   |

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|----|---|------|-----|
| 32 | The First Events in Photosynthesis: Electronic Coupling and Energy Transfer Dynamics in the Photosynthetic Reaction Center from Rhodospirillum rubrum. <i>Journal of Physical Chemistry B</i> , <b>1999</b> , 103, 2014-2032                  | 3.4  | 133 |
| 31 | Probing the ubiquinone primary energy conversion site in the Rhodospirillum rubrum cytochrome bc <sub>1</sub> complex. <i>Biochemical Society Transactions</i> , <b>1999</b> , 27, 572-6  | 5.1  | 1   |
| 30 | Structure, Function and Dysfunction of the Cytochrome bc <sub>1</sub> Complex Q <sub>o</sub> Site: X-Ray Verses EPR. <i>Biochemical Society Transactions</i> , <b>1999</b> , 27, A81-A81  | 5.1  |     |
| 29 | Correlation Between Cytochrome bc <sub>1</sub> Structure and Function <b>1999</b> , 241-250   |      |     |
| 28 | A reductant-induced oxidation mechanism for complex I. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>1998</b> , 1364, 245-57  | 4.6  | 118 |
| 27 | Non-inhibiting perturbation of the primary energy conversion site (Q <sub>o</sub> site) in Rhodospirillum rubrum ubiquinone: cytochrome c oxidoreductase (cytochrome bc <sub>1</sub> complex). <i>FEBS Letters</i> , <b>1998</b> , 431, 423-6 | 3.8  | 15  |
| 26 | Self-Assembled Monolayers of Synthetic Hemoproteins on Silanized Quartz. <i>Journal of Physical Chemistry B</i> , <b>1998</b> , 102, 1926-1937  | 3.4  | 32  |
| 25 | Surface-Promoted Thioether Linkage between Proto- or Hemato porphyrins and Thiol-Silanized Quartz: Formation of Self-Assembled Monolayers and Interaction with Imidazole and Carbon Monoxide. <i>Langmuir</i> , <b>1998</b> , 14, 4809-4818   | 4    | 30  |
| 24 | Molecular Orientation of Langmuir-Blodgett Films of Designed Heme Protein and Lipoprotein Maquettes. <i>Journal of Physical Chemistry B</i> , <b>1998</b> , 102, 6425-6432  | 3.4  | 26  |
| 23 | Functionalized de novo designed proteins: mechanism of proton coupling to oxidation/reduction in heme protein maquettes. <i>Biochemistry</i> , <b>1998</b> , 37, 16815-27   | 3.2  | 68  |
| 22 | Design, synthesis, and characterization of a photoactivatable flavocytochrome molecular maquette. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1998</b> , 95, 10465-70                         | 11.5 | 74  |
| 21 | Synthetic Protein Maquette Design for Light Activated Intraprotein Electron Transfer <b>1998</b> , 4201-4206  |      | 1   |
| 20 | Probing the Cytochrome bc <sub>1</sub> Complex Q <sub>o</sub> Site Mechanism Using Weak Binding Inhibitors. <b>1998</b> , 1521-1524   |      |     |
| 19 | Biological electron tunneling through native protein media. <i>Journal of Biological Inorganic Chemistry</i> , <b>1997</b> , 2, 393-398   | 3.7  | 49  |
| 18 | Engineering photosynthesis: synthetic redox proteins. <i>Inorganica Chimica Acta</i> , <b>1996</b> , 243, 213-218   | 2.7  | 39  |
| 17 | Biological electron transfer. <i>Journal of Bioenergetics and Biomembranes</i> , <b>1995</b> , 27, 263-74   | 3.7  | 157 |
| 16 | Initial charge separation kinetics of bacterial photosynthetic reaction centers in oriented Langmuir-Blodgett films in an applied electric field. <i>Chemical Physics</i> , <b>1995</b> , 197, 343-354  | 2.3  | 22  |
| 15 | Ubiquinone pair in the Q <sub>o</sub> site central to the primary energy conversion reactions of cytochrome bc <sub>1</sub> complex. <i>Biochemistry</i> , <b>1995</b> , 34, 15979-96   | 3.2  | 165 |

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|----|--|------|------|
| 14 | Design and synthesis of multi-haem proteins. <i>Nature</i> , <b>1994</b> , 368, 425-32   | 50.4 | 535  |
| 13 | Design and synthesis of simplified energy-converting proteins. <i>Biochemical Society Transactions</i> , <b>1994</b> , 22, 689-93  | 5.1  | 6    |
| 12 | Femtosecond coherent transient infrared spectroscopy of reaction centers from <i>Rhodospira rubra</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1994</b> , 91, 10360-4 | 11.5 | 51   |
| 11 | Electron transfer in proteins. <i>Current Opinion in Structural Biology</i> , <b>1993</b> , 3, 225-233   | 8.1  | 83   |
| 10 | Picosecond infrared studies of the dynamics of the photosynthetic reaction center. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1993</b> , 90, 5247-51                      | 11.5 | 30   |
| 9  | Electron-Transfer Mechanisms in Reaction Centers: Engineering Guidelines <b>1993</b> , 1-22  |      | 6    |
| 8  | Nature of biological electron transfer. <i>Nature</i> , <b>1992</b> , 355, 796-802   | 50.4 | 1659 |
| 7  | Cytochrome c and c2 binding dynamics and electron transfer with photosynthetic reaction center protein and other integral membrane redox proteins. <i>Biochemistry</i> , <b>1988</b> , 27, 2450-61                         | 3.2  | 109  |
| 6  | Interpretation of the Electric Field Sensitivity of the Primary Charge Separation in Photosynthetic Reaction Centers. <i>Israel Journal of Chemistry</i> , <b>1988</b> , 28, 133-139                                       | 3.4  | 7    |
| 5  | Manipulations of the Pool Characteristics of the Quinone Electron Donor and Acceptor to Ubiquinol-Cytochrome c Oxidoreductase. Evidence for Redox Contact between the Cytochrome b Hemes <b>1987</b> , 437-440             |      |      |
| 4  | Kinetics of electron transfer in reaction center-cytochrome o proteoliposomes. <i>FEBS Letters</i> , <b>1986</b> , 194, 115-120  | 3.8  | 0    |
| 3  | [27] Construction of the photosynthetic reaction center-mitochondrial ubiquinol-cytochrome-c oxidoreductase hybrid system. <i>Methods in Enzymology</i> , <b>1986</b> , 293-305  | 1.7  | 9    |
| 2  | Two distinct quinone-modulated modes of antimycin-sensitive cytochrome b reduction in the cytochrome bc1 complex. <i>FEBS Letters</i> , <b>1984</b> , 178, 343-50  | 3.8  | 39   |
| 1  | Photosynthesis: Bacterial Reaction Center <b>24-38</b>   |      | 2    |